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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,520	11/04/2005	Zuzanna Siwy	930008-2198	4343
7590 Ronald R Santucci Frommer Lawrence & Haug 745 Fifth Avenue New York, NY 10151				
			EXAMINER NOGUEROLA, ALEXANDER STEPHAN	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 08/26/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/528,520

Applicant(s)

SIWY ET AL.

Examiner

ALEX NOGUEROLA

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/18/2005 (preliminary amndt.).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date 3/18/2005
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

a) Claim 1 – it is not clear what limitations describe the nanodevice as opposed to another component of the claimed apparatus. This is especially important in regard to dependent claim 14, since claim 14 is directed to "[a] method for producing a nanodevice (1) of an apparatus according to claim 1."

b) Note that dependent claims will have the deficiencies of base and intervening claims. So claims 2-23 are indefinite for the same reason as claim 1 is indefinite.

c) Claim 24 - Claim 24 recites the limitation "said large-pre set-up" in line 2. There is insufficient antecedent basis for this limitation in the claim.

d) Claim 24 – what is meant by having the large-pore set-up “represent” the third electrode?

e) Claim 24 - Claim 24 recites the limitation “the conductive layer (U_2)” in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

f) Claim 24 – it is not clear what is meant by the phrase “provide an enhancing or a stopping of ions.”

g) Claim 24 does not appear to have any actual method steps, that is action(s) specified in the active voice performed on specific substances, materials or structures. Claim 24 only recites unclear implied structure for creating a certain desired result.

h) Note that dependent claims will have the deficiencies of base and intervening claims. So claim 25 is indefinite for the same reason as claim 24 is indefinite.

Allowable Subject Matter

3. Claim 1 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

4. Claims 2-23 would be allowable if rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

a) Claim 1 – the combination of limitations requires

a gate voltage (U2) supply (15) connected to said electrically conductive layer (14) on said front side (11) of said foil (3) controlling the flow of charged particles within said nanodevice (1) from said first compartment (4) to said second compartment (5) and vice versa.

In contrast, in Branton et al. US 6,627,067 B1 ("Branton") instead of a gate voltage supply means as claimed connected to the electrically conductive layer there is a measurement means, such as an ammeter or electron tunneling spectrometer. Branton controls the flow of charged particles within the nanodevice by appropriately selecting the voltage gradient applied across the nanodevice by the electrode in each

reservoir and by selecting the size and geometry of the openings. See Figures 5A and 9B; col. 16:46 – col. 18:16; col. 19:47-66; col. 20:07 – col. 21:15; and col. 24:46-61.

Similarly, in Crooks et al. US 7,077,939 B1 instead of a gate voltage supply means as claimed connected to the electrically conductive layer there is a measurement means, such as a Coulter counter. Crooks relies on the electrical field gradient across the nanodevice to control the flow of charged particles therethrough. See Figure 5B; col. 08:59 – col. 09:36; and col. 10:56 – col. 11:07.

Information Disclosure Statement

6. The information disclosure statement filed March 18, 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alex Noguerola/
Primary Examiner, Art Unit 1795
August 24, 2009